

Timothy E Higham

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

89
papers

2,421
citations

28
h-index

45
g-index

93
ext. papers

2,782
ext. citations

3.1
avg, IF

5.61
L-index

#	Paper	IF	Citations
89	High-speed terrestrial substrate transitions: How a fleeing cursorial day gecko copes with compliance changes that are experienced in nature. <i>Functional Ecology</i> , 2022 , 36, 471	5.6	1
88	Jumping with adhesion: landing surface incline alters impact force and body kinematics in crested geckos. <i>Scientific Reports</i> , 2021 , 11, 23043	4.9	
87	Comparative analysis of <i>Dipodomys</i> species indicates that kangaroo rat hindlimb anatomy is adapted for rapid evasive leaping. <i>Journal of Anatomy</i> , 2021 ,	2.9	2
86	Tail Control Enhances Gliding in Arboreal Lizards: An Integrative Study Using a 3D Geometric Model and Numerical Simulation. <i>Integrative and Comparative Biology</i> , 2021 , 61, 579-588	2.8	6
85	Tail Autotomy Alters Prey Capture Performance and Kinematics, but not Success, in Banded Geckos. <i>Integrative and Comparative Biology</i> , 2021 , 61, 538-549	2.8	2
84	And thereby hangs a tail: morphology, developmental patterns and biomechanics of the adhesive tails of crested geckos (). <i>Proceedings of the Royal Society B: Biological Sciences</i> , 2021 , 288, 20210650	4.4	4
83	Ankle structure of the Tokay gecko (<i>Gekko gecko</i>) and its role in the deployment of the subdigital adhesive system. <i>Journal of Anatomy</i> , 2021 , 239, 1503-1515	2.9	
82	Linking ecomechanical models and functional traits to understand phenotypic diversity. <i>Trends in Ecology and Evolution</i> , 2021 , 36, 860-873	10.9	11
81	The effects of temperature on the defensive strikes of rattlesnakes. <i>Journal of Experimental Biology</i> , 2020 , 223,	3	3
80	The Effects of Temperature on the Kinematics of Rattlesnake Predatory Strikes in Both Captive and Field Environments. <i>Integrative Organismal Biology</i> , 2020 , 2, obaa025	2.3	2
79	Kinematic integration during prey capture varies among individuals but not ecological contexts in bluegill sunfish, <i>Lepomis macrochirus</i> (Perciformes: Centrarchidae). <i>Biological Journal of the Linnean Society</i> , 2020 , 130, 205-224	1.9	1
78	Attachment Beyond the Adhesive System: The Contribution of Claws to Gecko Clinging and Locomotion. <i>Integrative and Comparative Biology</i> , 2019 , 59, 168-181	2.8	23
77	The Integrative Biology of Gecko Adhesion: Historical Review, Current Understanding, and Grand Challenges. <i>Integrative and Comparative Biology</i> , 2019 , 59, 101-116	2.8	39
76	Escape dynamics of free-ranging desert kangaroo rats (Rodentia: Heteromyidae) evading rattlesnake strikes. <i>Biological Journal of the Linnean Society</i> , 2019 , 127, 164-172	1.9	12
75	The Ecomechanics of Gecko Adhesion: Natural Surface Topography, Evolution, and Biomimetics. <i>Integrative and Comparative Biology</i> , 2019 , 59, 148-167	2.8	28
74	Replicating the complexity of natural surfaces: technique validation and applications for biomimetics, ecology and evolution. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2019 , 377, 20180265	3	13
73	Determinants of predation success: How to survive an attack from a rattlesnake. <i>Functional Ecology</i> , 2019 , 33, 1099	5.6	12

72	Evolution of pedal digit orientation and morphology in relation to acquisition and secondary loss of the adhesive system in geckos. <i>Journal of Morphology</i> , 2019 , 280, 1582-1599	1.6	3
71	A Hierarchical View of Gecko Locomotion: Photic Environment, Physiological Optics, and Locomotor Performance. <i>Integrative and Comparative Biology</i> , 2019 , 59, 443-455	2.8	4
70	Population genetic structure and species delimitation of a widespread, Neotropical dwarf gecko. <i>Molecular Phylogenetics and Evolution</i> , 2019 , 133, 54-66	4.1	22
69	XX/XY Sex Chromosomes in the South American Dwarf Gecko (<i>Gonatodes humeralis</i>). <i>Journal of Heredity</i> , 2018 , 109, 462-468	2.4	13
68	Pleistocene climatic fluctuations drive isolation and secondary contact in the red diamond rattlesnake (<i>Crotalus ruber</i>) in Baja California. <i>Journal of Biogeography</i> , 2018 , 45, 64-75	4.1	11
67	Neuromuscular control of locomotion is altered by tail autotomy in geckos. <i>Journal of Experimental Biology</i> , 2018 , 221,	3	4
66	Angling-induced injuries have a negative impact on suction feeding performance and hydrodynamics in marine shiner perch,. <i>Journal of Experimental Biology</i> , 2018 , 221,	3	7
65	The ontogenetic scaling of form and function in the spotted ratfish, <i>Hydrolagus collicii</i> (Chondrichthyes: Chimaeriformes): Fins, muscles, and locomotion. <i>Journal of Morphology</i> , 2018 , 279, 1408-1418	1.6	3
64	How rapid changes in body mass affect the locomotion of terrestrial vertebrates: ecology, evolution and biomechanics of a natural perturbation. <i>Biological Journal of the Linnean Society</i> , 2018 , 124, 279-293	1.9	12
63	Non-uniform evolutionary response of gecko eye size to changes in diel activity patterns. <i>Biology Letters</i> , 2018 , 14,	3.6	12
62	Rattlesnakes are extremely fast and variable when striking at kangaroo rats in nature: Three-dimensional high-speed kinematics at night. <i>Scientific Reports</i> , 2017 , 7, 40412	4.9	40
61	Recent interactions with snakes enhance escape performance of desert kangaroo rats (Rodentia: Heteromyidae) during simulated attacks. <i>Biological Journal of the Linnean Society</i> , 2017 , 122, 651-660	1.9	13
60	Lateral movements of a massive tail influence gecko locomotion: an integrative study comparing tail restriction and autotomy. <i>Scientific Reports</i> , 2017 , 7, 10865	4.9	21
59	Individuals of the common Namib Day Gecko vary in how adaptive simplification alters sprint biomechanics. <i>Scientific Reports</i> , 2017 , 7, 15595	4.9	7
58	Comparative dynamics of suction feeding in marine and freshwater three-spined stickleback, <i>Gasterosteus aculeatus</i> : kinematics and geometric morphometrics. <i>Biological Journal of the Linnean Society</i> , 2017 , 122, 400-410	1.9	6
57	Leaping lizards landing on leaves: escape-induced jumps in the rainforest canopy challenge the adhesive limits of geckos. <i>Journal of the Royal Society Interface</i> , 2017 , 14,	4.1	11
56	Integrating gastrocnemius force-length properties, activation and operating lengths reveals how deal with ecological challenges. <i>Journal of Experimental Biology</i> , 2017 , 220, 796-806	3	5
55	Consequences of lost endings: caudal autotomy as a lens for focusing attention on tail function during locomotion. <i>Journal of Experimental Biology</i> , 2016 , 219, 2416-22	3	17

54	Speciation through the lens of biomechanics: locomotion, prey capture and reproductive isolation. <i>Proceedings of the Royal Society B: Biological Sciences</i> , 2016 , 283,	4.4	27
53	Light level impacts locomotor biomechanics in a secondarily diurnal gecko, <i>Rhoptropus afer</i> . <i>Journal of Experimental Biology</i> , 2016 , 219, 3649-3655	3	7
52	Geckos decouple fore- and hind limb kinematics in response to changes in incline. <i>Frontiers in Zoology</i> , 2016 , 13, 11	2.8	17
51	Arboreal Day Geckos (<i>Phelsuma madagascariensis</i>) Differentially Modulate Fore- and Hind Limb Kinematics in Response to Changes in Habitat Structure. <i>PLoS ONE</i> , 2016 , 11, e0153520	3.7	13
50	Limb segment contributions to the evolution of hind limb length in phrynosomatid lizards. <i>Biological Journal of the Linnean Society</i> , 2016 , 117, 775-795	1.9	8
49	On the origin of frictional adhesion in geckos: small morphological changes lead to a major biomechanical transition in the genus <i>Gonatodes</i> . <i>Biological Journal of the Linnean Society</i> , 2016 ,	1.9	3
48	Complex Systems Are More than the Sum of Their Parts: Using Integration to Understand Performance, Biomechanics, and Diversity. <i>Integrative and Comparative Biology</i> , 2015 , 55, 146-65	2.8	37
47	Suction power output and the inertial cost of rotating the neurocranium to generate suction in fish. <i>Journal of Theoretical Biology</i> , 2015 , 372, 159-67	2.3	18
46	Morphology, Kinematics, and Dynamics: The Mechanics of Suction Feeding in Fishes. <i>Integrative and Comparative Biology</i> , 2015 , 55, 21-35	2.8	52
45	Subdigital adhesive pad morphology varies in relation to structural habitat use in the Namib Day Gecko. <i>Functional Ecology</i> , 2015 , 29, 66-77	5.6	44
44	Functional divergence between morphs of a dwarf chameleon: differential locomotor kinematics in relation to habitat structure. <i>Biological Journal of the Linnean Society</i> , 2015 , 116, 27-40	1.9	6
43	The evolution of digit form in <i>Gonatodes</i> (Gekkota: Sphaerodactylidae) and its bearing on the transition from frictional to adhesive contact in gekkotans. <i>Journal of Morphology</i> , 2015 , 276, 1311-32	1.6	26
42	Turbulence, Temperature, and Turbidity: The Ecomechanics of Predator-Prey Interactions in Fishes. <i>Integrative and Comparative Biology</i> , 2015 , 55, 6-20	2.8	43
41	Adaptive simplification and the evolution of gecko locomotion: morphological and biomechanical consequences of losing adhesion. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2015 , 112, 809-14	11.5	50
40	Density and distribution of cutaneous sensilla on tails of leopard geckos (<i>Eublepharis macularius</i>) in relation to caudal autotomy. <i>Journal of Morphology</i> , 2014 , 275, 961-79	1.6	9
39	Context-dependent changes in motor control and kinematics during locomotion: modulation and decoupling. <i>Proceedings of the Royal Society B: Biological Sciences</i> , 2014 , 281, 20133331	4.4	23
38	Sharks modulate their escape behavior in response to predator size, speed and approach orientation. <i>Zoology</i> , 2014 , 117, 377-82	1.7	23
37	Tail autotomy and subsequent regeneration alter the mechanics of locomotion in lizards. <i>Journal of Experimental Biology</i> , 2014 , 217, 3891-7	3	32

36	Geckos significantly alter foot orientation to facilitate adhesion during downhill locomotion. <i>Biology Letters</i> , 2014 , 10, 20140456	3.6	26
35	Terrestrial locomotion-where do we stand, where are we going? An introduction to the symposium. <i>Integrative and Comparative Biology</i> , 2014 , 54, 1051-7	2.8	5
34	The scaling of uphill and downhill locomotion in legged animals. <i>Integrative and Comparative Biology</i> , 2014 , 54, 1159-72	2.8	49
33	Passively stuck: death does not affect gecko adhesion strength. <i>Biology Letters</i> , 2014 , 10, 20140701	3.6	13
32	Modelled three-dimensional suction accuracy predicts prey capture success in three species of centrarchid fishes. <i>Journal of the Royal Society Interface</i> , 2014 , 11, 20140223	4.1	23
31	Springs, steroids, and slingshots: the roles of enhancers and constraints in animal movement. <i>Journal of Comparative Physiology B: Biochemical, Systemic, and Environmental Physiology</i> , 2013 , 183, 583-95	2.2	19
30	Controlled chaos: three-dimensional kinematics, fiber histochemistry, and muscle contractile dynamics of autotomized lizard tails. <i>Physiological and Biochemical Zoology</i> , 2013 , 86, 611-30	2	12
29	Integrative biology of tail autotomy in lizards. <i>Physiological and Biochemical Zoology</i> , 2013 , 86, 603-10	2	38
28	Life in the flow lane: differences in pectoral fin morphology suggest transitions in station-holding demand across species of marine sculpin. <i>Zoology</i> , 2012 , 115, 223-32	1.7	20
27	How forelimb and hindlimb function changes with incline and perch diameter in the green anole, <i>Anolis carolinensis</i> . <i>Journal of Experimental Biology</i> , 2012 , 215, 2288-300	3	54
26	Performance and three-dimensional kinematics of bipedal lizards during obstacle negotiation. <i>Journal of Experimental Biology</i> , 2012 , 215, 247-55	3	23
25	Time-varying motor control of autotomized leopard gecko tails: multiple inputs and behavioral modulation. <i>Journal of Experimental Biology</i> , 2012 , 215, 435-41	3	11
24	Effects of training and testosterone on muscle fiber types and locomotor performance in male six-lined racerunners (<i>Aspidoscelis sexlineata</i>). <i>Physiological and Biochemical Zoology</i> , 2011 , 84, 394-405	2	15
23	Posture, speed, and habitat structure: three-dimensional hindlimb kinematics of two species of padless geckos. <i>Zoology</i> , 2011 , 114, 104-12	1.7	28
22	The integration of locomotion and prey capture in divergent cottid fishes: functional disparity despite morphological similarity. <i>Journal of Experimental Biology</i> , 2011 , 214, 1092-9	3	23
21	How muscles define maximum running performance in lizards: an analysis using swing- and stance-phase muscles. <i>Journal of Experimental Biology</i> , 2011 , 214, 1685-91	3	27
20	Slipping, sliding and stability: locomotor strategies for overcoming low-friction surfaces. <i>Journal of Experimental Biology</i> , 2011 , 214, 1369-78	3	36
19	Divergence in locomotor performance, ecology, and morphology between two sympatric sister species of desert-dwelling gecko. <i>Biological Journal of the Linnean Society</i> , 2010 , 101, 860-869	1.9	42

18	Flip, flop and fly: modulated motor control and highly variable movement patterns of autotomized gecko tails. <i>Biology Letters</i> , 2010 , 6, 70-3	3.6	24
17	A new angle on clinging in geckos: incline, not substrate, triggers the deployment of the adhesive system. <i>Proceedings of the Royal Society B: Biological Sciences</i> , 2009 , 276, 3705-9	4.4	71
16	Functional diversification within and between muscle synergists during locomotion. <i>Biology Letters</i> , 2008 , 4, 41-4	3.6	60
15	Integration within and between muscles during terrestrial locomotion: effects of incline and speed. <i>Journal of Experimental Biology</i> , 2008 , 211, 2303-16	3	34
14	The integration of lateral gastrocnemius muscle function and kinematics in running turkeys. <i>Zoology</i> , 2008 , 111, 483-93	1.7	8
13	Suction feeding mechanics, performance, and diversity in fishes. <i>Integrative and Comparative Biology</i> , 2007 , 47, 96-106	2.8	118
12	Time resolved measurements of the flow generated by suction feeding fish. <i>Experiments in Fluids</i> , 2007 , 43, 713-724	2.5	33
11	The integration of locomotion and prey capture in vertebrates: Morphology, behavior, and performance. <i>Integrative and Comparative Biology</i> , 2007 , 47, 82-95	2.8	103
10	Feeding, fins and braking maneuvers: locomotion during prey capture in centrarchid fishes. <i>Journal of Experimental Biology</i> , 2007 , 210, 107-17	3	66
9	Multidimensional analysis of suction feeding performance in fishes: fluid speed, acceleration, strike accuracy and the ingested volume of water. <i>Journal of Experimental Biology</i> , 2006 , 209, 2713-25	3	126
8	The pressures of suction feeding: the relation between buccal pressure and induced fluid speed in centrarchid fishes. <i>Journal of Experimental Biology</i> , 2006 , 209, 3281-7	3	75
7	Constraints on starting and stopping: behavior compensates for reduced pectoral fin area during braking of the bluegill sunfish <i>Lepomis macrochirus</i> . <i>Journal of Experimental Biology</i> , 2005 , 208, 4735-46 ³		42
6	Spatial and temporal patterns of water flow generated by suction-feeding bluegill sunfish <i>Lepomis macrochirus</i> resolved by Particle Image Velocimetry. <i>Journal of Experimental Biology</i> , 2005 , 208, 2661-71 ³		114
5	Sucking while swimming: evaluating the effects of ram speed on suction generation in bluegill sunfish <i>Lepomis macrochirus</i> using digital particle image velocimetry. <i>Journal of Experimental Biology</i> , 2005 , 208, 2653-60	3	80
4	In vivo muscle activity in the hindlimb of the arboreal lizard, <i>Chamaeleo calyptratus</i> : general patterns and the effects of incline. <i>Journal of Experimental Biology</i> , 2004 , 207, 249-61	3	41
3	Locomotion of lizards on inclines and perches: hindlimb kinematics of an arboreal specialist and a terrestrial generalist. <i>Journal of Experimental Biology</i> , 2004 , 207, 233-48	3	70
2	Maneuvering in an arboreal habitat: the effects of turning angle on the locomotion of three sympatric ecomorphs of Anolis lizards. <i>Journal of Experimental Biology</i> , 2001 , 204, 4141-4155	3	70
1	Determinants of lizard escape performance: decision, motivation, ability, and opportunity 287-321		14

